

# SEQUENCE LISTING

<110> HERRMANN, RAFAEL  
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LEE, JIAN-MING

<120> SCORPION TOXINS

<130> BB1102

<140> US/09/857,401

<141> 2001-06-01

<150> 60/110,590

<151> 1998-12-02

<160> 24

<170> Microsoft Office 97

<210> 1

<211> 177

<212> DNA

<213> Leiurus quinquestriatus

<400> 1

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gaagctggac tcatagacgt aagatgtttt gcatctcgtg aatgttggga agcttgcaga 120  
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<210> 2

<211> 58

<212> PRT

<213> Leiurus quinquestriatus

<400> 2

Met Lys Ile Leu Ser Val Leu Leu Ile Ala Phe Ile Ile Cys Ser Ile  
1 5 10 15

Asn Ile Cys Ser Glu Ala Gly Leu Ile Asp Val Arg Cys Phe Ala Ser  
20 25 30

Arg Glu Cys Trp Glu Ala Cys Arg Lys Val Thr Gly Ser Gly Gln Gly  
35 40 45

Lys Cys Gln Asn Asn Gln Cys Arg Cys Tyr  
50 55

<210> 3

<211> 120

<212> DNA

<213> Leiurus quinquestriatus

<220>

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<223> n = A, C, G, or T

<220>  
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<400> 3  
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 agtggcaaca gtggaggaaa gtgtattaat ggaagatgcc actgctatcc angnaagtaa 120

<210> 4  
 <211> 39  
 <212> PRT  
 <213> Leiurus quinquestriatus

<220>  
 <221> UNSURE  
 <222> (38)  
 <223> Xaa = ANY AMINO ACID

<400> 4  
 Phe Ile Asn Ser Asn Val Glu Ala Ala Cys Gly Pro Gly Cys Arg Ser  
           1                  5                  10                  15  
 Ser Cys Gln Gln Ser Gly Asn Ser Gly Gly Lys Cys Ile Asn Gly Arg  
                   20                  25                  30  
 Cys His Cys Tyr Pro Xaa Lys  
                   35

<210> 5  
 <211> 90  
 <212> DNA  
 <213> Leiurus quinquestriatus

<400> 5  
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 aatgacaaat gcgtatgtga atctatatga 90

<210> 6  
 <211> 29  
 <212> PRT  
 <213> Leiurus quinquestriatus

<400> 6  
 Val Ser Cys Glu Asp Cys Pro Glu His Cys Ser Thr Gln Lys Ala Arg  
           1                  5                  10                  15  
 Ala Lys Cys Asp Asn Asp Lys Cys Val Cys Glu Ser Ile  
                   20                  25

<210> 7  
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 <212> DNA  
 <213> Leiurus quinquestriatus

<400> 7  
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 aatgcagtgg gaattccagt gtcatgtata cattctcgtc aatggttgga accatgtaag 120  
 aaagctggaa tgagatttgg aaaatgcatg aatcgcaa at gcgattgcac accaaagtga 180

<210> 8  
 <211> 59  
 <212> PRT  
 <213> Leiurus quinquestriatus

<400> 8  
 Met Lys Val Phe Phe Ala Val Leu Ile Thr Leu Phe Val Cys Ser Met  
           1                  5                  10                  15  
 Ile Ile Gly Ile Asn Ala Val Gly Ile Pro Val Ser Cys Ile His Ser  
                   20                  25                  30  
 Arg Gln Cys Trp Glu Pro Cys Lys Lys Ala Gly Met Arg Phe Gly Lys  
                   35                  40                  45  
 Cys Met Asn Arg Lys Cys Asp Cys Thr Pro Lys  
           50                  55

<210> 9  
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 <212> DNA  
 <213> Leiurus quinquestriatus

<400> 9  
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<210> 10  
 <211> 37  
 <212> PRT  
 <213> Leiurus quinquestriatus

<400> 10  
 Ile His Thr Asn Val Pro Cys Lys Asn Ser Gly Gln Cys Arg Pro Val  
           1                  5                  10                  15  
 Cys Ile Lys Arg Val Asn Asn Asn Ser Gly Lys Cys Gly Asn Asp Lys  
                   20                  25                  30  
 Cys Ile Cys Tyr Pro  
           35

<210> 11  
 <211> 150  
 <212> DNA  
 <213> Leiurus quinquestriatus

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 actacatcta aagaatgttg gtcggtttgt gagacattgt ataagaccac cagaggaaag 120  
 tgcatagaatt ggaaatgccg ctgttattcg 150

<210> 12  
 <211> 50  
 <212> PRT  
 <213> Leiurus quinquestriatus

<400> 12  
 Leu Ser Ser Ile Cys Ser Ile Val Gly Trp Ser Glu Ala Gln Phe Thr  
           1                  5                  10                  15

Asp Val Ser Cys Thr Thr Ser Lys Glu Cys Trp Ser Val Cys Glu Thr  
20 25 30

Leu Tyr Lys Thr Thr Arg Gly Lys Cys Met Asn Trp Lys Cys Arg Cys  
35 40 45

Tyr Ser  
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<210> 13  
<211> 138  
<212> DNA  
<213> Leiurus quinquestriatus

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tgcaattgtt atccatga 138

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<212> PRT  
<213> Leiurus quinquestriatus

<400> 14  
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1 5 10 15

Asn Ser Gly Glu Cys Ile Pro His Cys Ile Arg Ile Tyr Asn Thr Arg  
20 25 30

Ala Ala Lys Cys Ile Asn Lys Thr Cys Asn Cys Tyr Pro  
35 40 45

<210> 15  
<211> 180  
<212> DNA  
<213> Leiurus quinquestriatus

<400> 15  
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acagctcaat ttacacaagt aagttgcagt gcatctgac aatgttggtt ggtttgtcaa 120  
aacttgata aaacactcaa tgcaaagtgt atgaataata aatgccgctg ttattcgtaa 180

<210> 16  
<211> 59  
<212> PRT  
<213> Leiurus quinquestriatus

<400> 16  
Met Lys Ile Leu Ser Ala Leu Leu Leu Ala Leu Ile Ile Cys Ser Ile  
1 5 10 15

Val Gly Trp Ser Thr Ala Gln Phe Thr Gln Val Ser Cys Ser Ala Ser  
20 25 30

Asp Gln Cys Trp Leu Val Cys Gln Asn Leu Tyr Lys Thr Leu Asn Ala  
35 40 45

Lys Cys Met Asn Asn Lys Cys Arg Cys Tyr Ser  
50 55

<210> 17  
<211> 36  
<212> PRT  
<213> Leiurus quinquestriatus

<400> 17  
Gly Leu Ile Asp Val Arg Cys Tyr Asp Ser Arg Gln Cys Trp Ile Ala  
1 5 10 15

Cys Lys Lys Val Thr Gly Ser Thr Gln Gly Lys Cys Gln Asn Lys Gln  
20 25 30

Cys Arg Cys Tyr  
35

<210> 18  
<211> 38  
<212> PRT  
<213> Leiurus quinquestriatus

<400> 18  
Gly Val Pro Ile Asn Val Lys Cys Thr Gly Ser Pro Gln Cys Leu Lys  
1 5 10 15

Pro Cys Lys Asp Ala Gly Met Arg Phe Gly Lys Cys Ile Asn Gly Lys  
20 25 30

Cys His Cys Thr Pro Lys  
35

<210> 19  
<211> 29  
<212> PRT  
<213> Leiurus quinquestriatus

<400> 19  
Val Ser Cys Glu Asp Cys Pro Asp His Cys Ser Thr Gln Lys Ala Arg  
1 5 10 15

Ala Lys Cys Asp Asn Asp Lys Cys Val Cys Glu Pro Ile  
20 25

<210> 20  
<211> 59  
<212> PRT  
<213> Androctonus australis

<400> 20  
Met Lys Val Phe Ser Ala Val Leu Ile Ile Leu Phe Val Cys Ser Met  
1 5 10 15

Ile Ile Gly Ile Asn Ala Val Arg Ile Pro Val Ser Cys Lys His Ser  
20 25 30

Gly Gln Cys Leu Lys Pro Cys Lys Asp Ala Gly Met Arg Phe Gly Lys  
35 40 45

Cys Met Asn Gly Lys Cys Asp Cys Thr Pro Lys  
50 55

<210> 21  
<211> 37  
<212> PRT  
<213> Tityus serrulatus

<400> 21  
Val Phe Ile Asn Ala Lys Cys Arg Gly Ser Pro Glu Cys Leu Pro Lys  
1 5 10 15

Cys Lys Glu Ala Ile Gly Lys Ala Ala Gly Lys Cys Met Asn Gly Lys  
20 25 30

Cys Lys Cys Tyr Pro  
35

<210> 22  
<211> 37  
<212> PRT  
<213> Leiurus quinquestriatus

<400> 22  
Gln Phe Thr Asn Val Ser Cys Thr Thr Ser Lys Glu Cys Trp Ser Val  
1 5 10 15

Cys Gln Arg Leu His Asn Thr Ser Arg Gly Lys Cys Met Asn Lys Lys  
20 25 30

Cys Arg Cys Tyr Ser  
35

<210> 23  
<211> 45  
<212> PRT  
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<220>  
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1 5 10 15

Thr Ser Lys Glu Cys Trp Ser Val Cys Gln Arg Leu His Asn Thr Ser  
20 25 30

Arg Gly Lys Cys Met Asn Lys Lys Cys Arg Cys Tyr Ser  
35 40 45

<210> 24  
<211> 37  
<212> PRT  
<213> Leiurus quinquestriatus

<400> 24  
Gln Phe Thr Gln Glu Ser Cys Thr Ala Ser Asn Gln Cys Trp Ser Ile  
1 5 10 15

Cys Lys Arg Leu His Asn Thr Asn Arg Gly Lys Cys Met Asn Lys Lys  
20 25 30

Cys Arg Cys Tyr Ser  
35